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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,781	03/15/2001	Dov Dori	P-7481-US	5493

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09/27/2005

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EXAMINER

PROCTOR, JASON SCOTT

ART UNIT	PAPER NUMBER
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2123

DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/808,781

Applicant(s)

DORI, DOV

Examiner

Jason Proctor

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5 July 2005 has been entered.

Claims 1-40 are pending in the application. Claims 1-40 have been rejected.

Specification

The Examiner thanks Applicants for amending the specification to include the essential subject matter found in the provisional application related to claims 35-40.

Rejections under 35 U.S.C. §§ 102 and 103

In light of the amendments to each independent claim presented in the application, the Examiner withdraws the previous rejections under 35 U.S.C. §§ 102 and 103. Applicants' arguments have been fully considered but are moot.

Claim Rejections - 35 USC § 112

2. Claims 1-40 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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The independent claims in this application (claims 1, 16, 30, 33, and 34) all recite the phrase “modifying said textual description substantially in real time” or similar. While the term “substantially” is described as broad, not indefinite in MPEP 2173.05(b), in the context of these claims the Examiner submits that the term is indefinite. The step described by this limitation would be recognized by a person of ordinary skill in the art as computationally complex and dependent upon the technology employed. Improvements in computational capability and algorithms would affect the functional definition of the term “substantially in real time”.

It is therefore indefinite whether a system that performs the recited method and requires several seconds of computational time meets the limitation of modifying the textual description “substantially in real time”. This limitation appears to emphasize an enhanced computational speed that is not directly disclosed in the specification.

The Examiner respectfully suggests claiming that the textual description is modified in response to the modification of the diagrammed model, and for the other claims similarly. Alternatively, the Examiner respectfully requests that Applicants cite definite support in the application for the phrase “substantially in real time” that enables a person of ordinary skill in the art to determine precisely what type of time interval this phrase comprises.

Claims rejected but not specifically mentioned stand rejected by virtue of their dependence.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. § 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 1-11, 14-15, 33, and 35-40 are rejected under 35 U.S.C. § 103(a) as being unpatentable over “Extending the Object-Process Methodology to Handle Real-Time Systems” by Mor Peleg and Dov Dori (Peleg) in view of “OPCAT: Object-Process CASE Tool” by Dr. Dov Dori (Dori) and further in view of “From Object-Process Diagrams to a Natural Object-Process Language” by Mor Peleg and Dov Dori (Peleg2) (provided by Applicants).

The Examiner respectfully submits that Peleg constitutes prior art under 35 U.S.C. § 102(b) based on the publication date of January 1999 for the Journal of Object-Oriented Programming, Volume 11, Number 8. Dori is shown by the Internet Archive Wayback Machine as being published in August 1997 and therefore constitutes prior art under 35 U.S.C. § 102(b). Peleg2 constitutes prior art under 35 U.S.C. § 102(a) to a different inventive entity. None of the references appear subject to the exclusions of 35 U.S.C. § 103(c).

Regarding claims 1-7, 10-11, 14-15, and 33 these claims recite a computer-implemented method of modeling aspects of a system according to what Applicants have disclosed as Object-

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Process Methodology (OPM) (see specification as originally filed, page 2, lines 10-14). The Peleg reference discloses a method of modeling that anticipates this method (page 5, Section 3 “The Object-Process Methodology (OPM) and OPM/T”). The Peleg reference also discloses that the “OPCAT-Object Process CASE Tool, version 2.0” implements or will implement this method of modeling (page 17). The Peleg reference further discloses that the level of detail (zoom) is configurable [*“Processes with a bold contour are zoomed in (scaled up) in other, lower level, OPDs.”* (page 8, Section 4)].

The Dori reference confirms that OPCAT is a CASE Tool to support information systems development using OPM. (page 1). The Dori reference further discloses that OPCAT “supports all of OPM’s scaling capabilities” and “does not allow to draw elements that violate rules of OPM”, thus implicitly disclosing the claimed input method. It would have been obvious to a person of ordinary skill in the art to combine OPCAT with the teachings of the Peleg reference in light of the Peleg reference’s expressly disclosed suggestion to implement OPM and OPM/T in OPCAT.

The Peleg2 reference discloses the “Object-Process Language” (OPL) (see page 223, Section 2) conforming to at least OPM. Peleg2 further discloses the requisite graphical “Object-Process Diagrams” (OPD) (Fig. 3, etc.) and corresponding OPL sentences (page 224-225, etc.). The Peleg2 reference discloses the claimed OPL production rules (page 226, Section 4). Peleg2 further discloses the motivation for using OPL [*“The resulting OPL text is used for two major purposes: one is to provide a concise specification of the analyzed and designed system feedback to the prospective system customer, while the other is to automate the application generation, i.e., the executable code and database schema generation.”* (page 227, Section 5)].

Further, Peleg2 depicts figures that show the OPD and equivalent OPL simultaneously (Fig. 3, etc.) at least suggesting to one of ordinary skill in the art that the corresponding OPCAT implementation should display both the OPD and OPL simultaneously. Peleg2 further discloses motivation for doing so [“*The specification reader, when presented with both the graphic and the textual specification modes, enjoys the synergy of this combination.*” (page 227, Section 5)].

Peleg2 further discloses that the system generates a textual description to provide a simulation of a modeled system [“*The OPDs can, for example, be read in any sequence, and not just in the linear “reading order”, which is helpful for presenting concurrent processes.*” (page 227). Peleg2 also discloses that the system is used to automatically generate C++ code to implement the model (page 227, Section 5).

It would have been obvious to a person of ordinary skill in the art at the time of Applicants’ invention to combine the teachings of these references for at least the motivations cited above.

Regarding claims 8-9, Peleg2 discloses OPL Production Rules (page 226, Section 4). Official notice is taken that batch processing and real-time processing are well known in the art of software engineering. It would have been obvious to a person of ordinary skill in the art of software engineering, in combination with his own knowledge of that art and the teachings of the Peleg and Dori reference, to implement the step of generating in either a real-time or batch fashion, motivated in either case by the computational capabilities and end-user preferences.

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Regarding claims 35-40, these claims recite several well-known features of computer-implemented design tools. Official notice is taken that it is well known in the art to automatically generate documentation files comprising graphics and text. Official notice is taken that it is well known in the art to allow a plurality of users to work in real-time in a computer-implemented design tool. Official notice is taken that it is well known in the art to import at least a part of a pre-existing project (model in this context) into another project. Official notice is taken that it is well known to enforce a set of business rules on a design. Official notice is taken that it is well known to generate a diagram in accordance with a modeling language, particularly Unified Modeling Language. The Examiner respectfully submits that none of the limitations in claims 35-40 appear to represent the disclosed inventive concept.

4. Claims 12-13 and 30-32 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Peleg in view of Dori in view of Peleg2 as applied to claim 1 above, and further in view of "From Ancient Egyptian Language to Future Conceptual Modeling" by Peter P. Chan (Chan).

Regarding claims 12-13, none of the references cited in the rejection of claim 1 expressly disclose translating a label (acting as an entity in the OPD) from one natural language to another natural language.

Chen discloses the relationship between natural languages and entity-relationship modeling techniques (abstract). Most relevant to the claims, Chen expressly suggests the use of conceptual modeling to improve natural language understanding and translating techniques (page 7, Section 6). It would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of Chen regarding the translation of natural

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languages using conceptual modeling to translate the OPD and OPL disclosed by Peleg, Dovi, and Peleg2 to facilitate collaboration between users who speak different natural languages.

Although claims 30-32 recite a method with a different utility than claims 1 and 12-13, the recited limitations are nearly identical. Claims 30-32 are therefore rejected as obvious over the references cited above in the rejections of claims 1 and 12-13. The utility of claim 30 would have been obvious to a person of ordinary skill in the art in light of the limitations rejected in the context of claim 12, specifically translating from a subset of a first natural language to a subset of a second natural language.

5. Claims 16-28 and 34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Peleg in view of Dori in view of Peleg2 as applied to claims 1-11, 14-15 and 33 above, and further in view of "OPCAT-Object Process Case Tool: an Integrated System Engineering Environment (ISEE)" by Dov Dori and Arnon Sturm (Dori2).

The Examiner respectfully submits that the Dori2 reference is copyright 1998, therefore constitutes prior art under 35 U.S.C. § 102(b), thus does not appear to be subject to the exclusions of 35 U.S.C. § 103(c).

Claims 16-28 and 34 recite essentially the same limitations as claims 1-11, 14-15, and 33, except that the input is textual rather than graphical, and the output is graphical rather than textual. Dori2 discloses that the equivalence of graphical and textual representations of Object-Process Models (the OPD and OPL, respectively) is recognized in the art (page 556), referring to these representations as "alternatives".

It would have been obvious to a person of ordinary skill in the art, at the time of Applicants' invention, to combine the teachings of Dori2 acknowledging the equivalence of the graphical and textual representations of OPM, with the teachings of Peleg, Dori, and Peleg2 cited above to produce a tool that accepts textual input to create the alternative and equivalent graphical output. Motivation to do so is taught by Dori2, where "OPL is designed to be read as natural English" (page 556) and therefore would make the tool easier to use.

6. Claim 29 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Peleg in view of Dori in view of Peleg2 in view of Dori2 as applied to claim 16 above, and further in view of US Patent No. 5,893,105 to MacLennan.

None of the references cited in the rejection of claim 16 expressly teach the step of an animated simulation as recited by claim 29. However, MacLennan teaches an executable flowchart (abstract) that creates a diagram using "suitable flowchart elements" (column 3, lines 2-20) and teaches an animated simulation of the execution of the flowchart (column 3, lines 35-58).

It would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of MacLennan regarding an animated simulation of an executable flowchart with the combined teachings cited in the rejection of claim 16 in order to improve the visual cues indicating the progress of the simulation through the flowchart.

Conclusion

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Art considered pertinent by the examiner but not applied has been cited on form PTO-892.

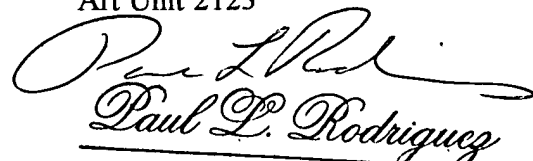
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Proctor whose telephone number is (571) 272-3713. The examiner can normally be reached on 8:30 am-4:30 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached at (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jsp

Jason Proctor
Examiner
Art Unit 2123


Paul L. Rodriguez 9/22/05
Primary Examiner
Art Unit 2125